



## ABSTRACT OF DISCLOSURE

A radio transmitting or receiving antenna which is physically compact being typically no more than [[(3)]] three percent of a wavelength in any dimension. The antenna comprises two electrical conducting surfaces (2) and (4) across which radio frequency electric field lines carrying half the power are arranged to cross radio frequency magnetic field lines carrying the remaining half power to thereby synthesize and propagate radio waves. The low impedance coaxial feeder (1) from the transmitter flows through a set of coils (3A) to (3D) wired in parallel and lying in a toroidal shape to create a circular **RF** magnetic field **H** and then enters a low impedance tap on a resonant autotransformer used to connect a high **RF** voltage and create a curving electromagnetic field **E** across the interaction zone in the volume between the upper metal cylinder (4) and the ground plane (1).